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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,810	05/28/2004	Ramesh NAGARAJAN	119016	3809
27074 7590 03/03/2008 OLIFF & BERRIDGE, PLC. P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER WASHINGTON, JAMARES	
			ART UNIT 2625	PAPER NUMBER
			NOTIFICATION DATE 03/03/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/709,810

Applicant(s)

NAGARAJAN ET AL.

Examiner

Jamare Washington

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Amendments and response received on December 17, 2007 have been entered. Claims 1-22 are currently pending with amendments to claims 1, 13, and 22 being made to even further distinguish applicant's invention over the art of record. Applicant's amendments and response are addressed hereinbelow.

### *Claim Rejections - 35 USC § 112*

2. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites "...a controller that controls the alteration circuit to perform at least some required alterations of the electronic data...". However, referring to the original specification at ¶ [6], [19-21], [24-25] and Fig. 2, applicant discloses the "processor" and "alteration circuit" being two separate entities. The "required processing" is performed by the processor whereas the alterations are performed during idle time by the alteration circuit. Therefore it appears that

applicant is not in possession of the claimed "alteration circuit...perform[ing] at least some required alterations...". Claim 1 should be corrected to indicate the required processing being performed by the processor and the alteration circuit only performing optional alterations when sufficient idle time exists as disclosed in the original specification. Claims 2-12 are dependent on claim 1 and are thus rejected for the reasons indicated above.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 13, 14, 18 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshihisa Kagaya et al (US 5119471).

Regarding claim 13, Kagaya et al discloses a method of processing electronic data, comprising:

processing the electronic data with required processes (Col. 2 lines 60-63 wherein the receiving processing means makes determination as to whether received character data needs modification processing);

storing the electronic data (Col. 2 lines 63-65 wherein if it is determined that the modifications are needed, the data is stored in character data buffer); and

controlling the stored electronic data, following at least some of the required processes, by determining whether the stored electronic data is awaiting further required processes unable to be performed at that time following the performed required processes (Col. 2 lines 63-67 wherein the data is stored following the receiving processing but prior to a required printing processing which is will not be performed until after the modification processing has taken place and the data is sent to the dot pattern data memory as explained at Col. 2 lines 45-59), determining if the stored electronic data will be waiting for a sufficient period of time between the required processes (Col. 2 lines 60-63 wherein the determination of whether the character data needs modification processing thus determines if the character data will be stored; If the character data is stored in the character data buffer then the determination is made that the data will be stored until the modifications have taken place which is a "sufficient period of time" for modification processing); and

altering the stored electronic data after determining that the stored electronic data will be waiting for the sufficient period of time (Col. 2 lines 65-67 wherein the modification processing is preformed following the data being stored in the character data buffer which, as stated previously, indicates the data will be stored for a sufficient period of time which is, in this case,

until all modification processing is completed and the data is sent to the dot pattern data memory).

Regarding claim 14, Kagaya discloses the method of processing electronic data of claim 13, further comprising:

inputting an image that is converted into the electronic data ("In the receiving processing PI, the data received from a host system is stored in the receiving buffer 1" at column 3 line 56);

and

outputting the electronic data to an output terminal (Fig. 1 output from P4 printing processing to numerals 7 and 8 print head control and space motor control, respectively).

Regarding claim 18, Kagaya et al discloses the method of processing electronic data of claim 13, further comprising:

controlling the electronic data to be processed after the electronic data has been requested by an output terminal (Col. 1 lines 38-40 indicate the receiving processing occurs after the character data is received from a host for printing), but prior to the electronic data being transmitted to the output terminal, the processing including the altering of the electronic data (Modification processing occurs before character data is sent to the dot pattern data memory for printing as previously rejected in claim 13 above. The character data is sent to the output terminal after modification processing as indicated in Fig. 5A).

Regarding claim 22, Kagaya et al discloses a method of using a multifunctional device that includes a processor (Fig. 1 P1), a memory (Fig. 1 numeral 2), a controller (Control apparatus depicted in Fig. 1) and an altering device (Fig. 1 P2), comprising:

processing electronic data with required processes using the processor (see rejection of claim 13);

storing the electronic data in the memory (see rejection of claim 13); and

controlling the stored electronic data, following at least some of the required processes, using the controller to determine whether the stored electronic data is awaiting further required processes unable to be performed at that time following the performed required processes, determining if the stored electronic data will be waiting for a predetermined sufficient period of time between the required processes (see rejection of claim 13); and

altering the stored electronic data when it is determined that the stored electronic data will be waiting for the predetermined sufficient period of time (see rejection of claim 13).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihisa Kagaya et al (US 5119471) in view of King-Sang Lam et al (US 6417014 B1).

Regarding claim 15, Kagaya et al discloses the method of processing electronic data of claim 13, further comprising:

determining whether the sufficient period of time exists when the electronic data is stored (see rejection of claim 13 wherein the determination is made if the electronic data is stored in the character data buffer), the sufficient period of time being a duration of time that the electronic data is stored without being processed (Col. 2 lines 63-65 wherein the data is stored and processed by the modification processing means only during an idle time of printing).

Kagaya et al fails to disclose using a predetermined value to determine if the predetermined time exists.

However, Lam teaches, in the same field of endeavor of idle time processing, using a predetermined value to determine whether a sufficient period of time exists ("The automatic process controller 40 receives an idle time input...manually from an operator..." at column 4 line 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to input a predetermined amount of idle time or "storage wait time" manually as taught by Lam in the apparatus as disclosed by Kagaya where the idle time is used for altering image data to insure sufficient idle time is present for the given tasks. The user would be able to provide more or less idle time to the apparatus according to the enhancements needed.

Regarding claim 16, Kagaya et al discloses the method of processing electronic data as rejected in claim 15, further comprising:

presetting the predetermined value (see rejection of claim 15), and using the predetermined value to automatically control the altering of the electronic data after it is determined that the sufficient period of time exists ("...the modification processing is performed utilizing an idle time of the processing" at Col. 2 line 65, Kagaya).

Regarding claim 17, Kagaya et al discloses the method of processing electronic data of claim 15, further comprising:

controlling the electronic data to be processed prior to the electronic data being stored in the memory (see rejection of claim 13), the processing including the altering of the electronic data by compressing the electronic data (Col. 2 lines 9-11 wherein the character is compressed).

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kagaya et al in view of Reiner Eschbach et al (US 7102792).

Regarding claim 19, Kagaya et al discloses the method of processing electronic data of claim 13.

Kagaya fails to disclose or suggest altering the electronic data to include a change in one of at least sharpness, contrast, color and exposure of the electronic data.

Eschbach, in the same field of endeavor of modifying image data to affect a more pleasing appearance, teaches the above attributes as well known attributes of an image that enhance image quality ("A pleasing image can be defined as an image having good color, good contrast, good sharpness and good exposure" at column 1 line 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the method of processing electronic data as disclosed by Kagaya with the capabilities of altering the well-known attributes of sharpness, color, contrast, and exposure of the image data as taught by Eschbach to afford a more pleasing output image.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kagaya et al in view of Giovanni Giuffrida et al (US 20030028503 A1).

Regarding claim 20, Kagaya et al discloses the method of processing electronic data of claim 13.

Kagaya fails to disclose or suggest extracting metadata from the electronic data.

Giuffrida, in the same field of endeavor of manipulation of electronic documents, teaches extracting metadata from electronic data ("The second processing element is configured to receive substantially format-invariant data files, extract spatial layout facts, and provide the extracted spatial layout facts to a reasoning element. A database is configured to simultaneously provide spatial layout rules to the reasoning element; the spatial layout rules are used to extract the metadata from the substantially format-invariant data file" at ¶ [9], Giuffrida).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize extracting of metadata from electronic data as taught by Giuffrida in the method of processing electronic data as disclosed by Kagaya to obtain information from the image of which processes would most likely enhance the image, thereby only altering the attributes of the image which would need the alterations.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kagaya et al in view of Barry Appelman (US 6112250 A).

Regarding claim 21, Kagaya discloses the method of processing electronic data of claim 13, further comprising:

altering the electronic data during the sufficient period of time (see rejection of claim 13).

Kagaya fails to disclose altering the electronic data during the sufficient period of time to include one of at least reformatting the electronic data into a summary page and recompressing the electronic data after the electronic data is stored.

Appelman, in the same field of endeavor of manipulating electronic data to enhance data attributes, teaches a compression circuit that recompresses electronic data (Fig. 3 numeral 26 recompressor. "The recompressor 26 re-compresses the decompressed data using any algorithm that provides a better compression ratio than the original compression" at column 3 line 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the modification processing circuit of the multifunctional device as disclosed by Kagaya with a compression circuit that recompresses electronic data as taught by Appelman to "provide a better compression ratio than the original compression" (column 2 line 56, Appelman).

*Allowable Subject Matter*

10. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 1-12 have been thoroughly searched, but examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any subsequent prior art which teaches a controller that controls the [processor] to perform at least some required [processing] of the electronic data, determines whether the stored electronic data is awaiting further required action unable to be performed at that time following at least some of the performed required [processes], determines if the stored electronic data will be waiting for a sufficient period of time, and controls the alteration circuit to perform optional alterations of the stored electronic data when the controller determines that the sufficient period of time exists.

*Response to Arguments*

13. Applicant's arguments, see remarks, filed on December 17, 2007, with respect to Claim 1 have been fully considered and are persuasive. The previous rejection of claim 1 has been withdrawn.

14. Applicant's arguments filed December 17, 2007 regarding claims 13 and 22 have been fully considered but they are not persuasive.

Applicant's remarks: Kagaya fails to disclose or suggest a controller that controls the alteration circuit to perform at least some required alterations of the electronic data, determines whether the stored electronic data is awaiting further required action unable to be performed at that time following at least some of the performed required alterations... and controls the alteration circuit to perform optional alterations of the stored electronic data when the controller determines that the sufficient period of time exists.

Examiner's response: Kagaya teaches, as recited in the rejection of claim 13 above, a determination of whether the stored electronic data is awaiting further required action unable to be performed at that time; if the character data is stored in the character data buffer then the determination is made that the data will be stored until the modifications have taken place which is a "sufficient period of time" for modification processing and also indicates the data will be stored, a not undergo the required printing processing which is unable to be performed, until the modifications have taken place. Regarding the argument that the alteration circuit performs optional alterations, claims 13 and 22 fail to recite any such subject matter therefore this argument is moot.

*Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamares Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit 2625



JW

February 21, 2008



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